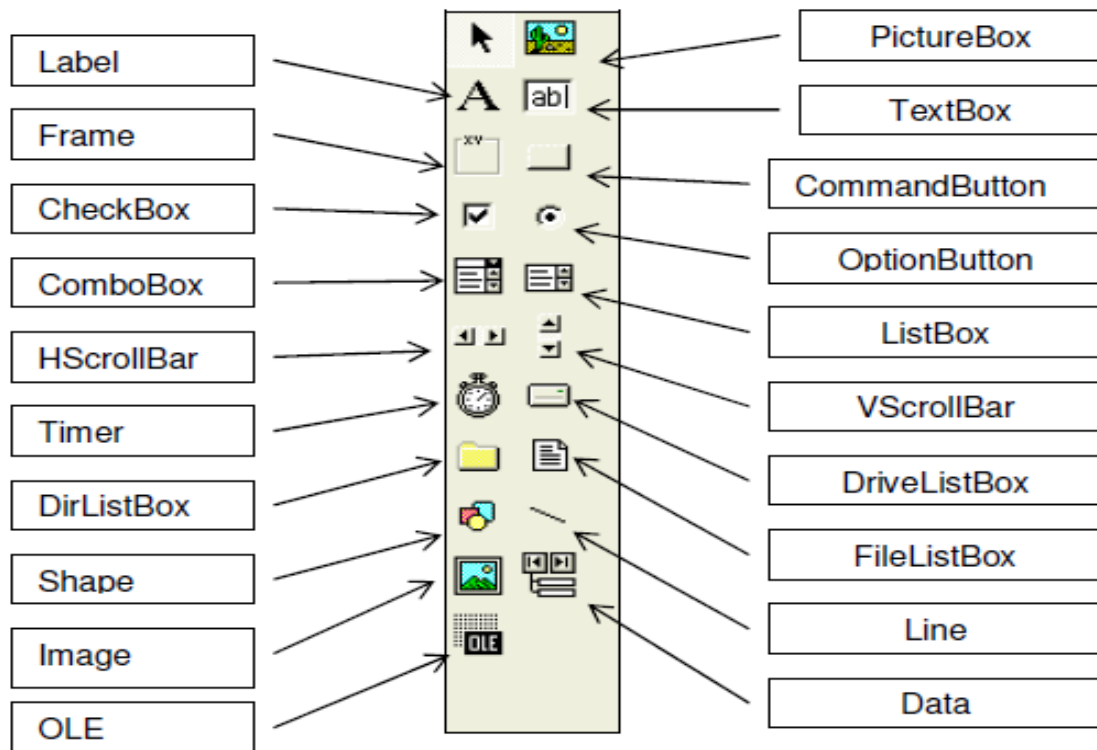


## Second Lecture : The Control Tools in Visual Basic

### Introduction

Tools are an objects that could be selected from tool box to be placed on form. When VB is used with new project , the program displays simple forms without controls (tools). Then tools could be placed on form in design stage to customize the form to the required application.



The tool box includes many tools and in general they are :

1. **Pointer: (not control)** used to select tools already on form.
2. The rest of tools in tool box are divided to many categories *according to their functions* :

First The control tools :there are three different tools that are used for control (as switches ):

- a) Command Button :used as a switch buttons.
- b) Option (Radio) Button :For selection as a group. when control is selected from the group all others are automatically deselected.
- c) Check Box: For check selection. Used as individuals (not grouped). It may be selected more than one check control at same time.

### Second Tools that deal with Text:

- a) Text Box: For text edit, like Note Pad , it can be single line or multi lines.
- b) List Box : for a list, user can adds to and/or deletes from this list.
- c) Combo Box: consist of (list and arrow) if user selects item from the list , it will be displayed in text box. Vertical size is fixed.
- d) Label : Fixed text appear on form for remark and label of other tools.

Third Container Tool: is a frame tool ,which used to grouped many other tools. It is important in the application's interface design.

### Fourth Tools deals with Images and Graphics:

- a) Picture Box: used to display images, and used to output any type of data (numeric, string, ...ect.) .
- b) Image :used instead of picture box because it consumes fewer system resources, but used only to displays the images in stretch style.
- c) Shape: used only to display rectangles, circles and ovals on the forms. Never contains any events.
- d) Line: used only to display lines. Never contains any events.

### Fifth Tools for File Search:

- a) DriveListBox
- b) DirListBox
- c) FileListBox

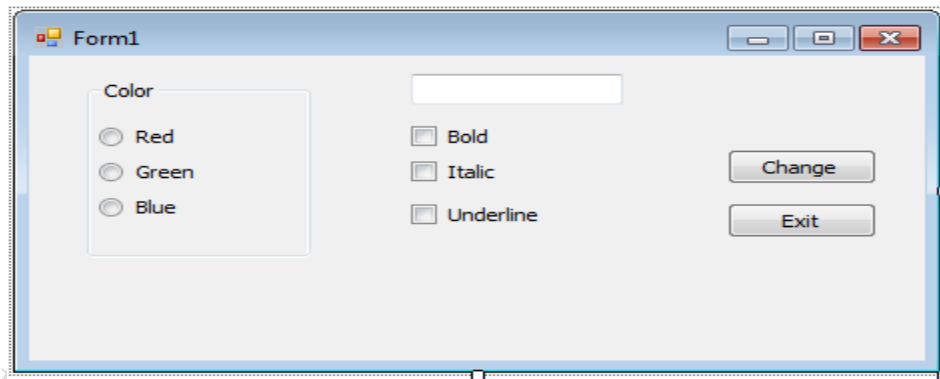
### Sixth Tools Deals with Time and Bars

- a) Timer : used to control object movement. Not appear in the Application Window
- b) HScrollBar : creat stand-alone horizontal scroll bar.
- c) VScrollBar : creat stand-alone vertical scroll bar.

Seventh Data Tool: used as an user interface with an databases applications.

**Example-1** In this example we will design a project contain commands and options buttons used to change the color of form and used text box and check box to change the font in the text box:

### **1<sup>st</sup> Stage: Form Designer:**



## 2<sup>nd</sup> Stage: Set Properties

Object (Tool)	Property	Setting
Command1	Caption	Change
Command2	Caption	Exit
Text1	Text	
Frame1	Caption	Color
Option1	Caption	Red
Option2	Caption	Green
Option3	Caption	Blue
Check1	Caption	Bold
Check2	Caption	Italic
Check3	Caption	Underline

## 3<sup>rd</sup> Stage: Write Codes

- 1) Command1 (Change)
  - if option1.value=true then
  - form1.backcolor=vbred
  - end if
  - if option2.value=true then
  - form1.backcolor=vbgreen

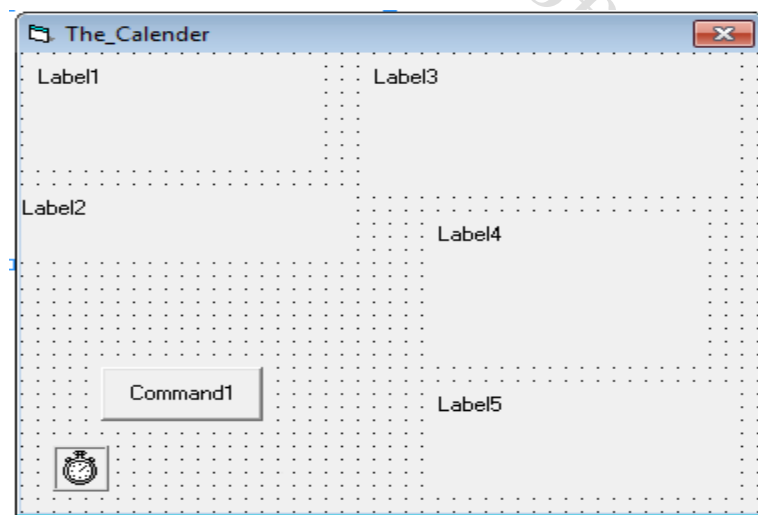
```

end if
if option3.value=true then
    form1.backcolor=vbblue
end if
if check1.value=checked then
    text1.fontbold=true
end if
if check2.value=checked then
    text1.font.italic=true
end if
if check3.value=checked then
    text1.font.underline=true
end if
2) Command2 (Exit)
End

```

**Example-2** in the following example will design a form include five label tools and command button and timer, where the labels used to display the calender details (year ,month , day and the current time of the computer) and the timer tool used to display the time in seconds format :

### 1<sup>st</sup> Stage: Form Design



## 2<sup>nd</sup> Stage: Set Properties

Object (Tool)	Property	Setting
Label1	Name	lblDay
	Caption	
	FontName	Times new roman
	FontBold	true
	FontSize	24
	Alignment	2-center
Label2	Name	lblTime
	Caption	
	FontName	Times new roman
	FontBold	true
	Alignment	2-center
Label3	Name	lblMonth
	Caption	
	FontName	Times new roman
	FontBold	True
	FontSize	24
Label4	Alignment	2-center
	Name	lblNumber
	Caption	
	FontName	Arial
	FontBold	true
	FontSize	72
Label5	Alignment	2-center
	Name	lblYear
	Caption	
	FontName	Times new roman
	FontBold	true
	FontSize	24
Timer1	Alignment	2-center
	Name	timDisplay
Command1	Interval	1000
	Name	cmdExit
	Caption	Exit

## 3<sup>rd</sup> Stage: Write Codes

### 3) Timer (timDisplay)

Dim Today As Variant

Today = Now

lblDay.Caption = Format(Today, "dddd")

lblMonth.Caption = Format(Today, "mmmm")

lblYear.Caption = Format(Today, "yyyy")

lblNumber.Caption = Format(Today, "d")

lblTime.Caption = Format(Today, "h:mm:ss ampm")

### 4) Command1 (Exit)

End



### **Exercises:**

1. What are the tools in VB?
2. What is the template forms?
3. What are the main categories of the tools in VB ? what is the criteria of the classification?
4. List in detail the switch controls?
5. What are the differences between
  - The option button and check box?

- The text box and label?
  - The list box and combo box?
6. What is the different between the picture box and the image ?
  7. What is the different between the rectangle shape tool and frame tool ?
  8. What in the main function of the dirlistbox tool ?
  9. What is the function of the timer ?
  10. What is data tool ?
  11. Design a project to display the date ( only day and month and year ) within single label tool ?